Your task is to create an automatic scorer for a bowling game. An input to your program will be a sequence of scores. Each one defines number of pins knocked down each time when the player rolled the ball. Output of the program should be the summary score for each part of the game (called frame) as well as the final score for the player.

Scoring rules for a bowling game are as follows:

In bowling, matches consist of each player bowling a "game". Each game is divided into ten "frames". A frame allows a bowler two chances to knock down all ten pins. The number of pins knocked over in each frame is recorded. A "strike" is scored when a player knocks down all pins on the first roll in the frame. Rather than a score of 10 for the frame, the player's score will be 10 plus the total pins knocked down on the next two rolls in the next frame(s). A "spare" is scored when all pins are knocked down using both rolls in the frame. The player's score for that frame will be 10 plus the number of pins knocked down on the first roll in the next frame. A player who rolls a spare or strike in the last frame is given one or two more rolls to score additional points, respectively.

Below is an example of a complete bowling game. Top row shows number of pins knocked down. Crossed out boxes indicate a spare (all 10 pins were knocked out with second roll). Black box indicates a strike (all pins were knocked down with first roll). Bottom row shows a rolling score summary that your program should be able to calculate.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 4 | 4 | 5 | 6 |  | 5 |  |  |  | 0 | 1 | 7 |  | 6 |  |  |  | 2 |  | 6 |
| 5 | | 14 | | 29 | | 49 | | 60 | | 61 | | 77 | | 97 | | 117 | | 133 | | |

Given the game above input to your program will be:

1 4 4 5 6 spare 5 spare strike 0 1 7 spare 6 spare strike 2 spare 6

Output should be:

5 14 29 49 60 61 77 97 117 133

Elements of the input data are separated by whitespace. There is no end-of-input character - your program should output score as soon as it gets input that constitutes a valid (ten frame) game.